

Industrial Grade Cellular Modem/Router for CDMA & GSM/GPRS Networks

The Synxcom cellular based **C-Link** series modem/router is the latest industrial grade wireless communication devices, offering a cost effective two-way connections between a central host computer and remote RTU such as SCADA equipment and meters over CDMA/1xRTT and GSM/GPRS networks. The C-Link device supports RTUs and meters with RS-232 or RS-485 serial ports at speeds from 1200 to up to 115,200 bps.

The **C-Link** modems provide reliability and ease of installation, making it an ideal low cost alternative to wired devices for connecting remote devices to host data acquisition equipment. The embedded TCP/IP protocol stacks support operation over CDMA/1xRTT and GSM/GPRS data networks. Operation over circuit switched data (CSD), SMS, dynamic IP, and mobile IP (static IP) modes are all supported.

The **C-Link** cellular modem includes a dual-band CDMA/1xRTT, a quad-band GSM/GPRS or 3G Edge transceiver. Power to the modem can be a DC voltages source, or when connecting the modem to an AC power source, a wide range AC to DC power converter module is included. Standard dual band antenna or external high gain antenna is supported by a panel-mounted SMA RF connector at the rear panel.



KEY FEATURES

Dual band 800/1900 Mhz CDMA or Quad band GSM/GPRS cellular or PCS support

Selectable data rates support for DTE from 1200 to 115,200 bps

Selectable EIA RS-232/V.24 (DB-9F) and RS-485 (RJ-11C) DTE serial port interface

Ethernet Router Supports DHCP Server and Clint protocols

Supports CSD, dynamic IP, and Mobile IP (static IP) protocols

Over-the-air programming (OTASP) supported

Powered by wide range of AC & DC power supply options:

- 9 to 36 volts DC
- 100 – 264 volts AC, 50/60Hz

Wide range of operating temperatures: -30 to +70°C

Optional features:

- *Standard portable dual band antenna*
- *External high gain antenna*
- *NEMA 4X enclosure with internal AC or DC power supply*

General Specifications

Transceiver Specifications

CDMA:

Dual band supports 800/1900 MHz
 IS-2000 Release 0 (CDMA 2000 1X)
 IS-95A/IS-95B
 IS-707A service options IS-835 (TCP/IP/PPP)
 CSD, Simple IP, Mobile IP (Static IP)
 Data Rate: 14.4 kbps (CSD), 153 Kbps (1xRTT)

GSM:

Quad band transceiver supports 850/900/1800/1900 MHz

TX Output Power:

- 850 MHz: Class 4 (2W) or class 5 (0.8W)
- 900 MHz: Class 4 (2W)
- 1800/1900 MHz: Class 1 (1W)

RX Sensitivity:

- 850/900 MHz: -106 dBm, typical
- 1800/1900 MHz: -105 dBm, typical

GPRS Data Features

- Maximum baud rate: 85.6 kbps
- Coding scheme: CS1-CS4
- Multi-slot class 8 (4 down, 1 up)
- Class B GSM 07.10 multiplexing protocol

Antenna Interface

The modem provides a panel mount RF connector to support various antenna options. The antenna will meet the following specifications:

Frequency: 800-1990 Mhz
 Connector Type: SMA female
 Impedance: 50 Ohms

Serial Port Interface:

The *C-link* modem's serial ports support two types of interface standards, RS-232 or RS-485, selectable

RS-232:

Connector: DB-9F
 Signals: RTS, CTS, CD, DTR, DSR, TD, RD

RS-485:

Connector: RJ-11C
 Signals: TX+, TX-, RX+, RX- (2 or 4-wire)

Data Rate Support:

Data speed: 1200 to 115,200 bps, asynchronous
 Data Format: 7-E-1, 7-O-1, 8-N-1, 8-E-1, 8-O-1

Front Panel Indicators & Controls

LED Indicators:

PWR, LINK, ACT, TD, RD, CD

Test Button:

Provide self test, RSSI and system reset

Power Supply Specifications

Power Input: 9 to 36 VDC:
 AC to DC adapter: 100-264 VAC, 50/60Hz
 100-400 VDC

Power Consumption:

Idle mode: 1.0 watts
 Peak power: 6.0 watts, pulse
 Average: 4.0 watts, typical

Mechanical Specifications

Enclosure dimensions:

3.3"(W) x 4.2"(L) x 1.2" (H)

84mm(W) x 107mm(L) x 30mm(H)

Weight: 9 oz, without AC power module

Environment Specifications

Temperature:

Operation: -30° to +70° C

Storage: -40° to +85° C

Humidity:

Up to 95 % non-condensing

Model Numbers and Optional Features

SM2010C: CDMA stand-alone with AC power supply, 90-264 VAC or 115-400 VDC

SM2010C-DC: CDMA stand-alone with DC power supply input from 9 to +36 volts

SM2020G: GSM stand-alone with AC power supply, 90-264 VAC or 115-400 VDC

SM2020G-DC: GSM stand-alone with DC power supply input from 9 to +36 volts

Option: NEMA 4X Enclosure with internal AC or DC power supply converter

